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10/541,634

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EXAMINER

RAINEY, ROBERT R

ART UNIT

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2629

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|---|--|
| Office Action Summary | Application No. 10/541,634 | Applicant(s) SARAYEDDINE ET AL. | |
| | Examiner ROBERT R. RAINEY | Art Unit 2629 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4 and 6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4 and 6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 July 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claim 1 as amended have been considered but are moot in view of the new ground(s) of rejection.
2. Applicant's arguments filed 4/24/08 regarding the objections to Fig. 1 and 2 have been fully considered but they are not persuasive. While the rectangular blocks do have reference numbers associated with them, descriptive text labels are required in order to convey the meaning of the figure to the reader. For example in Fig. 1 the shapes of items 1-5, for example, provide the reader with information about the general function of the item without reference to the specification. The shapes of items 10-12 do not provide the such information.
3. The amendment of the Abstract of the specification effectively overcomes the objection to the specification.
4. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in France on Jan. 7, 2003 and a certified copy of the 0300228 application as required by 35 U.S.C. 119(b) was received by the Office on 5/5/2008.

Drawings

1. The drawings are objected to because Figures 1 and 3 contain unlabeled rectangular boxes, MPEP 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures

appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-4 and 6-7** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,803,902 to *Janssen et al.* ("*Janssen*") in view of U.S. Patent No. 6,950,088 to *Dalal* ("*Dalal*") and further in view of U.S. Patent No. 6,952,241 to *Ouchi et al.* ("*Ouchi*").

As to **claim 1**, *Janssen* discloses a scrolling color projection system and in particular: An image projection system comprising: a light valve comprising a pixel matrix array disposed in rows and columns on a substrate forming an active matrix (see for example Fig. 3), an illumination system for moving bands of different colored light over the light valve, perpendicularly to said rows (see for example Fig. 1), means for identifying the illumination color of each row of pixels of the light valve (see for example column 1 lines 41-43), means of managing video data of said images for controlling the writing of said pixels of the light valve (see for example column 1 lines 33-40), means of synchronizing the video data sent to each row of pixels of the light valve according to the illumination color of said row identified by said identification means (see for example column 1 lines 33-40).

Janssen does not expressly disclose that the identification means comprises at least one photosensitive sensor level with each row of said pixels of the light valve or the use of the sensors to measure illumination intensity or that the measurement of the illumination intensity is used in the means of managing video data to adjust the video data for controlling the writing of said pixels.

Dalal discloses an LCD light valve and in particular: that the identification means comprises arrays of photosensors adjacent to the rows of display elements with each sensor being disposed level with a row of pixels of the light valve (see for example column 2 lines 10-18 or Fig. 3 and column 4 lines 34-50 or the abstract especially, "Arrays or groups of photosensors are positioned

laterally adjacent the active portion of the panel” and column 4 lines 13-16 and Fig. 2 items 18, 20 and 22; note that the location of the photosensor arrays is constrained to be next to the rows of display elements thus any photosensor within this area will be coincident, i.e. level, with at least one of the rows.) and the sensors being designed to identify the illumination color of the rows (see for example column 2 lines 15-19).

Janssen and *Dalal* are analogous art because they are from the same field of endeavor, which is displays based on light modulators.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to add photosensor based synchronization of light bands and data writing as disclosed by *Dalal* to the system disclosed by *Janssen*. The suggestion/motivation would have been to provide advantages such as maximizing the addressable time between color bands (see for example *Dalal* column 1 line 65 to column 2 line 3 or Figs. 1 and 3).

Janssen and *Dalal* disclose the use of an array of photosensors level with the rows of but do not expressly disclose that there is at least one photosensitive sensor level with each row of pixels of the light valve. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide at least one sensor per row and align the sensor with the row, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ

8 and that rearranging parts of an invention involves only routine skill in the art. In *re Japikse*, 86 USPQ 70.

Janssen and *Dalal* do not expressly disclose that the photosensitive sensor level with each row of pixels is designed to measure the illumination intensity of each row of pixels of the light valve or that the measurement of the illumination intensity is used in the means of managing video data to adjust the video data for controlling the writing of said pixels.

Ouchi discloses a projection type video display apparatus and in particular: a photosensitive sensor designed to measure the illumination intensity of the of the light valve (see for example column 24 lines 62-66) and that the measurement of the illumination intensity is used in the means of managing video data to adjust the video data for controlling the writing of said pixels (see for example Fig. 24 and 24:56-25:7; note that the text labels for items 327 and 345 of Fig. 24 incorrectly refer to the items as "LIGHT *BULB* DRIVE CIRCUIT' AND "LIGHT *BULB*" respectively, where as the specification in the section cited refers to them as "LIGHT *VALVE* DRIVE CIRCUIT' AND "LIGHT *VALVE* " respectively; note that applicant shows in Fig. 3 of the instant application that the video data 131' is the totality of signals controlling the light valve; *Ouchi* in Fig. 24 shows that input to light valve 345 coming from the light valve drive circuit 327, which along with items 325, 326 and 328, all of which are perform processing of the video data, receives input from timing control 332 which receives input from light amount sensor 329; this control relationship is also described in 24:65-25:5).

Janssen, Dalal and *Ouchi* are analogous art because they are from the same field of endeavor, which is displays based on light modulators.

At the time of invention, it would have been obvious to include a measurement the illumination intensity as disclosed by *Ouchi* in a system as disclosed by *Janssen* and *Dalal* and to do so using the sensors already in place, which inherently measure the intensity of the illumination whether or not that information is used; consider that *Ouchi* explicitly teaches using at least one sensor for an entire display to adjust the video data and since a display could be one with a single row of pixels it is obvious that one could duplicate the parts to have a sensor per row. The suggestion/motivation would have been to provide advantages such as to maintain or improve the color temperature (see for example *Ouchi* column 24 lines 52-55).

As to **claim 4**, in addition to the rejection of claim 1 over *Janssen* and *Dalal*, *Dalal* further discloses that the or each photosensitive sensor of the light valve is incorporated in said substrate (see for example column 2 lines 12-13 or column 4 lines 24-27).

As to **claim 6**, in addition to the rejection of claim 1 over *Janssen, Dalal* and *Ouchi*, *Dalal* further discloses that the or each photosensitive sensor is associated with a colored filter (see for example column 2 lines 10-12).

As to **claim 7**, in addition to the rejection of claim 6 over *Janssen, Dalal* and *Ouchi, Dalal* further discloses that said colored filter associated with said photosensitive sensor of each row of pixels of the light valve forms a continuous band associated with the set of photosensitive sensors of each row of pixels of the light valve (see for example column 4 lines 13-24 and Fig. 2 with items 18, 20 and 22 representing the continuous bands).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT R. RAINEY whose telephone number is (571)270-3313. The examiner can normally be reached on Monday through Friday 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amare Mengistu can be reached on (571) 272-7674. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/RR/

/Amare Mengistu/

Supervisory Patent Examiner, Art Unit 2629